UNITED STATES DEPARTMENT OF COMMERCE United States Patent and Trademark Office Address: COMMISSIONER FOR PATENTS P.O. Bey 1459.

P O Box 1450 Alexandria, Virgima 22313-1450 www.uspto.gov

NOTICE OF ALLOWANCE AND FEE(S) DUE

7590 08/19/2009

ALSTON & BIRD LLP BANK OF AMERICA PLAZA 101 SOUTH TRYON STREET, SUITE 4000 CHARLOTTE, NC 28280-4000

826

EXAMINER

PUENTE, EVA Y1

ART INTE

PAPER NUMBER

ART UNIT

DATE MAILED: 08/19/2009

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/601,071	06/20/2003	Kyeong Jin Kim	042933/302927	8921

TITLE OF INVENTION: APPARATUS, AND ASSOCIATED METHOD, FOR DETECTING DATA COMMUNICATED TO A RECEIVING STATION IN A MULTIPLE-CHANNEL COMMUNICATION SYSTEM

APPLN. TYPE	SMALL ENTITY	ISSUE FEE DUE	PUBLICATION FEE DUE	PREV. PAID ISSUE FEE	TOTAL FEE(S) DUE	DATE DUE
nonprovisional	NO	\$1510	\$300	\$0	\$1810	11/19/2009

THE APPLICATION IDENTIFIED ABOVE HAS BEEN EXAMINED AND IS ALLOWED FOR ISSUANCE AS A PATENT. PROSECUTION ON THE MERITS IS CLOSED. THIS NOTICE OF ALLOWANCE IS NOT A GRANT OF PATENT RIGHTS. THIS APPLICATION IS SUBJECT TO WITHDRAWAL FROM ISSUE AT THE INITIATIVE OF THE OFFICE OR UPON PETITION BY THE APPLICANT. SEE 37 CFR 1.313 AND MPEP 1308.

THE ISSUE FEE AND PUBLICATION FEE (IF REQUIRED) MUST BE PAID WITHIN THREE MONTHS FROM THE MAILING DATE OF THIS NOTICE OR THIS APPLICATION SHALL BE REGARDED AS ABANDONED. THIS STATUTORY PERIOD CANNOT BE EXTENDED. SEE 35 U.S.C. 1SI. THE ISSUE FEE DUE INDICATED ABOVE DOES NOT REFLECT A CREDIT FOR ANY PREVIOUSLY PAID ISSUE FEE IN THIS APPLICATION. IF AN ISSUE FEE HAS PREVIOUSLY BEEN PAID IN THIS APPLICATION (AS SHOWN ABOVE), THE RETURN OF PART B OF THIS FORM WILL BE CONSIDERED A REQUEST TO REAPPLY THE PREVIOUSLY PAID ISSUE FEE TOWARD THE ISSUE FEE NOW DUE.

HOW TO REPLY TO THIS NOTICE:

I. Review the SMALL ENTITY status shown above.

If the SMALL ENTITY is shown as YES, verify your current SMALL ENTITY status:

A. If the status is the same, pay the TOTAL FEE(S) DUE shown above.

B. If the status above is to be removed, check box 5b on Part B - Fee(s) Transmittal and pay the PUBLICATION FEE (if required) and twice the amount of the ISSUE FEE shown above, or

If the SMALL ENTITY is shown as NO:

A. Pay TOTAL FEE(S) DUE shown above, or

B. If applicant claimed SMALL ENTITY status before, or is now claiming SMALL ENTITY status, check box 5a on Part B - Fee(s) Transmittal and pay the PUBLICATION FEE (if required) and 1/2 the ISSUE FFE: shown above.

II. PART B - FEE(S) TRANSMITTAL, or its equivalent, must be completed and returned to the United States Patent and Trademark Office (USPTO) with your ISSUE FEE and PUBLICATION FEE (if required). If you are charging the fee(s) to your deposit account, section "4b" of Part B - Fee(s) Transmittal should be completed and an extra copy of the form should be submitted. If an equivalent of Part B is filed, a request to reapply a previously paid issue fee must be clearly made, and delays in processing may occur due to the difficulty in recognizing the paper as an equivalent of Part B.

III. All communications regarding this application must give the application number. Please direct all communications prior to issuance to Mail Stop ISSUE FEE unless advised to the contrary.

IMPORTANT REMINDER: Utility patents issuing on applications filed on or after Dec. 12, 1980 may require payment of maintenance fees. It is patentee's responsibility to ensure timely payment of maintenance fees when due.

PART B - FEE(S) TRANSMITTAL

Complete and send this form, together with applicable fee(s), to: Mail Commissioner for Patents P.O. Box 1450 Alexandria, Virginia 22313-1450

or Fax (571)-273-2885

appropriate. All further indicated unless correcte maintenance fee notifical	correspondence includired below or directed oth	ig the Patent, advance on herwise in Block 1, by (a	rders and notification of n a) specifying a new corres	naintenance fees wi pondence address;	II be and/or	mailed to the current (b) indicating a sepa	correspondence address as arate "FEE ADDRESS" for
CURRENT CORRESPOND	nane	rs Each additional	paper	can only be used for icate cannot be used for such as an assignment ling or transmission.	or domestic mailings of the for any other accompanying ent or formal drawing, must		
	ERICA PLAZA YON STREET, SU		Lhe	Certify that this	ificate	of Mailing or Trans	mission g deposited with the United st class mail in an envelope above, or being facsimile ate indicated below.
CHARLOTTE, 1	NC 28200-4000						(Depositor's name)
			<u> </u>				(Signature)
							(Date)
APPLICATION NO.	FILING DATE		FIRST NAMED INVENTOR		ATTO	RNEY DOCKET NO.	CONFIRMATION NO.
10/601,071 TITLE OF INVENTION IN A MULTIPLE-CHAN			Kycong Jin Kim D, FOR DETECTING DA	TA COMMUNICA		42933/302927 TO A RECEIVING S	8921 STATION
APPLN. TYPE	SMALL ENTITY	ISSUE FEE DUE	PUBLICATION FEE DUE	PREV. PAID ISSUE	FEE	TOTAL FEE(S) DUE	DATE DUE
nonprovisional	NO	\$1510	\$300	\$0		\$1810	11/19/2009
EXAM	INER	ART UNIT	CLASS-SUBCLASS				
PUENTE,	EVA YI	2611	375-341000	•			
1. Change of correspondence address or indication of "Fee Address" or CFR 1.363. ☐ Change of correspondence address for Change of Correspondence Address form PTO/SB/122) attached. ☐ "Fee Address" indication (or "Fee Address" Indication form PTO/SB/147; 80 0.30.2 or more recent) attached. Use of a Customer Number is required. ASSIGNEE NAME AND RESIDENCE DATA TO BE PRINTED ON PLEASE NOTE: Unless an assignee is dentified below, no assigner corodation as set forth in 37 CFR 3.11. Completion of this form is No.				3 registered patent vely, e firm (having as a sgent) and the name meys or agents. If n printed.	attorn memb s of u so nam	er a 2 o to e is 3	ocument has been filed for
recordation as set forti (A) NAME OF ASSIG	GNEE		(B) RESIDENCE: (CITY	and STATE OR CO	DUNT	RY)	oup entity 🚨 Government
4a. The following fee(s): Issue Fee Publication Fee (N Advance Order - 4	o small entity discount p		o. Payment of Fee(s): (Plea A check is enclosed. Payment by credit can The Director is hereby overpayment, to Depo	d. Form PTO-2038	is atta	ched.	shown above) ficiency, or credit any n extra copy of this form).
	s SMALL ENTITY state	is. See 37 CFR 1.27.	b. Applicant is no long				
NOTE: The Issue Fee an interest as shown by the	d Publication Fee (if req records of the United Sta	rired) will not be accepted tes Patent and Trademark	d from anyone other than to Office.	he applicant; a regis	tered a	ittorney or agent; or th	ne assignee or other party in
Authorized Signature				Date			
Typed or printed name				Registration No			
This collection of inform an application. Confident submitting the complete this form and/or suggesti Box 1450, Alexandria, V Alexandria, Virginia 223	ation is required by 37 C tiality is governed by 35 I application form to the ons for reducing this but irginia 22313-1450. DC 13-1450.	FR 1.311. The informatic U.S.C. 122 and 37 CFR USPTO. Time will vary den, should be sent to the ONOT SEND FEES OR (on is required to obtain or r 1.14. This collection is est depending upon the indiv e Chief Information Office COMPLETED FORMS TO	etain a benefit by th imated to take 12 m idual case. Any cor r, U.S. Patent and T O THIS ADDRESS.	e publ inutes nment Traden SENI	ic which is to file (and to complete, includir s on the amount of tin ark Office, U.S. Dep O TO: Commissioner	d by the USPTO to process) g gathering, preparing, and me you require to complete artment of Commerce, P.O. for Patents, P.O. Box 1450,

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.



UNITED STATES PATENT AND TRADEMARK OFFICE

NITED STATES DEPARTMENT OF COMMERCE United States Patent and Trademark Offic Address: COMMISSIONER FOR PATENTS

P O Box 1450 Alexandria, Virgima 22313-1450 www.uspto.gov

DATE MAILED: 08/19/2009

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/601,071	06/20/2003	Kyeong Jin Kim	042933/302927	8921
826 75	90 08/19/2009		EXAM	UNER
ALSTON & BIR	D LLP	PUENTE, EVA Y1		
BANK OF AMERI		ART UNIT	PAPER NUMBER	
101 SOUTH TRYON STREET, SUITE 4000 CHARLOTTE, NC 28280-4000			2611	

Determination of Patent Term Adjustment under 35 U.S.C. 154 (b)

(application filed on or after May 29, 2000)

The Patent Term Adjustment to date is 647 day(s). If the issue fee is paid on the date that is three months after the mailing date of this notice and the patent issues on the Tuesday before the date that is 28 weeks (six and a half months) after the mailing date of this notice, the Patent Term Adjustment will be 647 day(s).

If a Continued Prosecution Application (CPA) was filed in the above-identified application, the filing date that determines Patent Term Adjustment is the filing date of the most recent CPA.

Applicant will be able to obtain more detailed information by accessing the Patent Application Information Retrieval (PAIR) WEB site (http://pair.uspto.gov).

Any questions regarding the Patent Term Extension or Adjustment determination should be directed to the Office of Patent Legal Administration at (571)-272-7702. Questions relating to issue and publication fee payments should be directed to the Customer Service Center of the Office of Patent Publication at 1-(888)-786-0101 (571)-272-4200.

Notice of Allowability

Application No.	Applicant(s)
10/601,071	KIM, KYEONG JIN
Examiner	Art Unit
EVA Y. PUENTE	2611

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address-All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included
herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. THIS
NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS. This application is subject to withdrawal from issue at the initiative
of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

- This communication is responsive to appeal brief filed on 3/12/09.
- The allowed claim(s) is/are 1,3,4,6,7,9-17 and 19-24.
- 3. Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) All b) Some* c) None of the:
 - 1. Certified copies of the priority documents have been received.
 - 2. Certified copies of the priority documents have been received in Application No. _____
 - Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).
 - * Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.
THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

- A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
- 5. CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) 🔲 including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) 🔲 hereto or 2) 🔲 to Paper No./Mail Date _____
 - (b) including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date ______.

Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).

6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

- 1. Notice of References Cited (PTO-892)
- 2.
 Notice of Draftperson's Patent Drawing Review (PTO-948)
- 3. Information Disclosure Statements (PTO/SB/08),
- Paper No./Mail Date <u>9/23/04</u>
 4. ☐ Examiner's Comment Regarding Requirement for Deposit
- Examiner's Comment Regarding Requirement for Deposi of Biological Material
- 5. Notice of Informal Patent Application
- Interview Summary (PTO-413), Paper No./Mail Date .
- 7. Examiner's Amendment/Comment
- 8. X Examiner's Statement of Reasons for Allowance
- 9. 🗌 Other ___

Application/Control Number: 10/601,071 Page 2

Art Unit: 2611

DETAILED ACTION

Applicant's arguments, see Appeal Brief, filed on 3/12/09, with respect to claims
 3-4, 6-7, 9-17, and 19-24 have been fully considered and are persuasive. The previous rejection has been withdrawn.

Allowable Subject Matter

- 2. Claims 1, 3-4, 6-7, 9-17, and 19-24 are allowed.
- 3. The following is an examiner's statement of reasons for allowance: None of the prior art teaches or suggests a MIMO system comprising a selector configured to select metric calculator values and a number of possible paths for respective ones of a plurality of channels; a decoder configured to separately decode values including perform a path length estimation for the plurality of channels and estimate a minimum path length from the number of possible path.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Eva Y Puente whose telephone number is 571-272-3049. The examiner can normally be reached on M-F, 7:30 AM to 5:00 PM.

Application/Control Number: 10/601,071

Art Unit: 2611

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chieh Fan can be reached on 571-272-3042. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Eva Yi Puente /E. Y. P./ Examiner, Art Unit 2611

August 10, 2009

/Chieh M Fan/ Supervisory Patent Examiner, Art Unit 2611